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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/537,692	03/29/2000	Larry W. Fullerton	1659.0870000	7285

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EXAMINER

NGUYEN, SIMON

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/537,692

Applicant(s)

FULLERTON ET AL.

Examiner

SIMON D NGUYEN

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-77 is/are pending in the application.
- 4a) Of the above claim(s) 1-41 and 70-77 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 42-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6,8,9,14.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 63 is objected to because of the following informalities: steps e-g should change to steps d-f, respectively. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 42, 47-49, 54-56, 61-63, 68-69 are rejected under 35 U.S.C. 102(e) as being anticipated by McCorkle et al. (6,700,939).

Regarding claim 42, McCorkle discloses an impulse radio transmitter (figs.1, 3-4), comprising: a timing generator (#130 of fig.1) to receive a periodic timing signal (102 of fig.1) and an information signal (120 of fig.1) and to produce one of a first signal and a second signal based on the information signal and the periodic timing signal; a first pulser (320, 324, 332 of fig. 3) to receive the first signal (312 of figs. 3-4) and to produce a first impulse radio signal (340 of fig.3) consisting of a first type of impulse waveform (340 fig.4); a second pulser (322, 324, 334 of fig.3) to receive a second signal (314 of

fig.3) and to produce a second impulse radio signal (342 of fig.3) consisting of a second type of impulse waveform (342 of fig.4) , wherein the second type of impulse waveform is substantially an inverse of the first typed of impulse waveform (waveform 342 is in an inverse of the waveform 340 as shown in fig.4); and a combiner (348 of fig.3) to combine the first impulse radio signal and the second impulse radio signal (352 of fig.4) and thereby produce a flip modulated impulse radio signal (354 of fig.4).

Regarding claim 49, McCorkle discloses an impulse radio transmitter (figs.1, 3-4), comprising: a timing generator (#130 of fig.1) to receive a periodic timing signal (102 of fig.1) and an information signal (120 of fig.1) and to produce a first signal, a delayed first signal (TD+L of fig.3-4), a second signal (312), and a delayed second signal (T D+L+X of figs. 3-4); a first pulser (320, 324, 332 of fig. 3) to receive the first signal (312 of figs. 3-4) and to produce a first impulse radio signal (340 of fig.3), and a delayed first impulse radio signal, in response to the delayed first signal (time delay via transmission line (T D+L) consisting of a first type of impulse waveform (340 fig.4); a second pulser (322, 324, 334 of fig.3) to receive a second signal (314 of fig.3) and to produce a second impulse radio signal (342 of fig.3) having a delayed second signal (T D+L+X) consisting of a second type of impulse waveform (342 of fig.4) , wherein the second type of impulse waveform is substantially an inverse of the first typed of impulse waveform (waveform 342 is in an inverse of the waveform 340 as shown in fig.4); and a combiner (348 of fig.3) to combine the first impulse radio signal and the delayed first impulse signal with the second impulse radio signal (352 of fig.4) and the delayed

second impulse signal and thereby produce a flip modulated impulse radio signal (354 of fig.4).

Regarding claim 56, this claim is rejected for the same reason as set forth in claim 42.

Regarding claim 63, this claim is rejected for the same reason as set forth in claim 49.

Regarding claims 47, 54, 61, and 68, McCorkle discloses a positive impulse and a negative impulse (fig.1).

Regarding claims 48, 62, McCorkle discloses the first impulse signal having a first data state (340 fig.3), and the second impulse signal having a second data state (342 of fig.3).

Regarding claims 55, 69, McCorkle discloses the first impulse signal having a first data state (340 fig.3) and a second data state (129 of fig.3), and the second impulse signal having a third data state (342 of fig.3) and a fourth data state (346 of fig.3).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 43, 50, 57, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCorkle et al. (6,700,939).

Regarding claims 43, 50, 57, and 64, McCorkle further discloses the timing generator a code signal, and trigger signals (column 9 lines 59-67). However, McCorkle does not specifically disclose first and second triggers. It should be noted that first and second trigger signals are obvious included in the first and second signals in order to activate the timing generator to generate the timing and information signals prior to transmitting which is known to those skilled in the art.

6. Claims 44-46, 51-53, 58-60, 65-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCorkle et al. (6,700,939) in view of Finn et al. (6,351,652).

Regarding claims 44-46, 51-53, 58-60, and 65-67 McCorkle discloses a trigger (column 9 line 63). It should be noted that first and second enable signals are obviously including in the transmitter of McCorkle in order to trigger the timing generator to generate the first and second signals. McCorkle does not specifically disclose first and second enable signals.

Finn discloses an impulse radio communication (abstract, fig.6), wherein a precision timing generator including an enable signal for enable an impulse radio transmitter signal (column 15 lines 26-45). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have McCorkle, modified by Finn to trigger and enable the first and second pulsers to produce a first and second impulse radio signals for transmission in order to prevent the signal interference.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (703) 308-1116. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

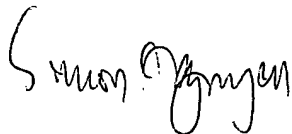
Or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Hand-delivered response should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Simon Nguyen

March 27, 2004

A handwritten signature in cursive script, appearing to read "Simon Nguyen", is written over the typed name and date.